



Date: 3 April 2014

Ref: modular Approval (MA) Compliance Letter for FCC ID: JE4STAMP433

To: Federal Communications Commission

Subject: FCC ID: JE4STAMP433 MA compliance letter

This letter introduces Risco Ltd.'s request to approve its 433.92 MHz "Stamp", model # RWTRSS10433B-40 according to FCC Single Modular Approval procedure, and to demonstrate the means to control the module as required by the MA procedure.

The RWTRSS10433B-40 is "Stamp" that transmit in 433.92Mhz .

The Transceiver Si4432 is by Silicon Laboratories' highly integrated, single chip wireless ISM. It includes a complete line of transmitters, receivers, and transceivers allowing the RF system designer to choose the optimal wireless part for their application.

The Si4432 offers advanced radio features including continuous frequency coverage from 240–930 MHz. The Si4432's high level of integration offers reduced BOM cost while simplifying the

overall system design. Additional system features such as an automatic wake-up timer, low battery detector, 64 byte TX/RX FIFOs, automatic packet handling, and preamble detection reduce overall current consumption and allow the use of lower-cost system MCUs. An integrated temperature sensor, general purpose ADC, poweron- reset (POR), and GPIOs further reduce overall system cost and size.

The Si4432's digital receive architecture features a high-performance ADC and DSP based modem which performs demodulation, filtering, and packet handling for increased flexibility and performance. This digital architecture simplifies system design while allowing for the use of lower-end MCUs. The direct digital transmit modulation and automatic PA power ramping ensure precise transmit modulation and reduced spectral spreading ensuring compliance with FCC and ETSI regulations.



<p>As per § 15.212 Modular transmitters: Single modular transmitters must meet the following requirements to obtain a modular transmitter approval.</p>		
Requirement	Not Maintained	Maintained
(1) The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.		YES
(2) The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.		YES
(3) The modular transmitter must have its own power supply regulation.		YES
<p>(4) The modular transmitter must comply with the antenna and transmission system requirements of §§15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a “unique” antenna coupler (at all connections between the module and the antenna, including the cable).</p> <p>The “professional installation” provision of §15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.</p>		YES



<p>As per § 15.212 Modular transmitters: Single modular transmitters must meet the following requirements to obtain a modular transmitter approval.</p>		
Requirement	Not Maintained	Maintained
<p>(5) The modular transmitter must be tested in a stand-alone configuration, <i>i.e.</i>, the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in §15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see §15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see §15.31(i)).</p>		YES
<p>(6) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.</p>		YES
<p>(7) The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.</p>		YES



As per § 15.212 Modular transmitters: Single modular transmitters must meet the following requirements to obtain a modular transmitter approval.		
Requirement	Not Maintained	Maintained
(8) The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.		YES

Thank you,
Motti Barad,
Certification Engineer
RISCO Group

A handwritten signature in blue ink, appearing to be "Motti Barad", is located below the typed name.